ABSTRACT:

The invention relates to a method of generating a maximum entropy speech model for a speech recognition system.

To improve the statistical properties of the generated speech model there is proposed that:

5 - by evaluating a training corpus, first probability values $p_{ind}(w \mid h)$ are formed for N-grams with $N \geq 0$;

- an estimate of second probability values $p_\lambda(w \mid h)$, which represent speech model values of the maximum entropy speech model, is made in dependence on the first probability values;

10 - boundary values m_α are determined according to the equation

$$m_\alpha = \sum_{(h,w)} p_{ind}(w \mid h) \cdot N(h) \cdot f_\alpha(h,w)$$

where $N(h)$ is the rate of occurrence of the respective history h in the training corpus and $f_\alpha(h, w)$ is a filter function which has a value different from zero only for certain N-

15 grams predefined a priori and featured by the index α, and otherwise has the zero value;

- an iteration of speech model values of the maximum entropy speech model is continued until values $m_\alpha^{(n)}$ determined in the nth iteration step according to the formula

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$$m_\alpha^{(n)} = \sum_{(h,w)} p_\lambda^{(n)}(w \mid h) \cdot N(h) \cdot f_\alpha(h,w)$$

sufficiently accurately approach the boundary values m_α according to a predefinable convergence criterion.